

We claim:

1. A method of controlling traffic loading on a cable modem termination system (CMTS) for a cable data system, comprising the steps of:

5 determining the available bandwidth on a requested cable data system channel;  
comparing the available bandwidth on the requested cable data system channel to bandwidth being request by a new subscriber;

determining whether the available bandwidth is greater than, less than or equal to the bandwidth to be allocated by the CMTS to the new subscriber; and

10 granting or denying cable data service to the new subscriber based upon the determination of whether the available bandwidth is greater than, less than or equal to the bandwidth to be allocated to the new subscriber.

2. The method according to claim 1, further comprising the step of:

15 transferring the new subscriber to a different cable data system channel with more available capacity when the available bandwidth on the requested cable data system channel is less than the bandwidth to be allocated to the new subscriber.

3. The method according to claim 1, wherein said cable data system channels are  
20 upstream channels to the CMTS.

4. The method according to claim 1, wherein said cable data system channels are downstream cable data system channels from the CMTS.

5. The method according to claim 1, further comprising the steps of:

granting cable data system service to said new subscriber on said requested cable data system channel even though the available bandwidth on the requested cable data system channel is less than the bandwidth being allocated to the new subscriber; and

5 flagging said requested cable data system channel as being over subscribed.

6. The method according to claim 5, wherein data packets for at least some subscribers are lost when said cable data system channel is over subscribed.

10 7. The method according to claim 6, wherein data packets are randomly lost.

8. The method according to claim 6, wherein data packets are selected to be lost based on each subscribers level of service, wherein higher levels of service lose less packets.

15 9. A system controlling traffic loading on a cable modem termination system (CMTS) for a cable data system, comprising:

means for determining the available bandwidth on a requested cable data system channel;

means for comparing the available bandwidth on the requested cable data system channel to bandwidth being request by a new subscriber;

20 means for determining whether the available bandwidth is greater than, less than or equal to the bandwidth to be allocated by the CMTS to the new subscriber; and

means for granting or denying cable data system service to the new subscriber based upon the determination of whether the available bandwidth is greater than, less than or equal to the bandwidth to be allocated to the new subscriber.

10. The system according to claim 9, further comprising:

means for transferring the new subscriber to a different cable data system channel with more available capacity when the available bandwidth on the requested cable data system channel is less than the bandwidth to be allocated to the new subscriber.

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11. The system according to claim 9, wherein said cable data system channels are upstream channels to the CMTS.

12. The system according to claim 9, wherein said cable data system channels are downstream channels from the CMTS.

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13. The system according to claim 9, further comprising:

means for granting cable data system service to said new subscriber on said requested data channel even though the available bandwidth on the requested data channel is less than the bandwidth being allocated to the new subscriber; and

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means for flagging said requested data channel as being over subscribed.

14. The system according to claim 13, wherein data packets for at least some subscribers are lost when said data channel is over subscribed.

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15. The system according to claim 14, wherein data packets are randomly lost.

16. The system according to claim 14, wherein data packets are selected to be lost based on each subscribers level of service, wherein higher levels of service lose less packets.

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